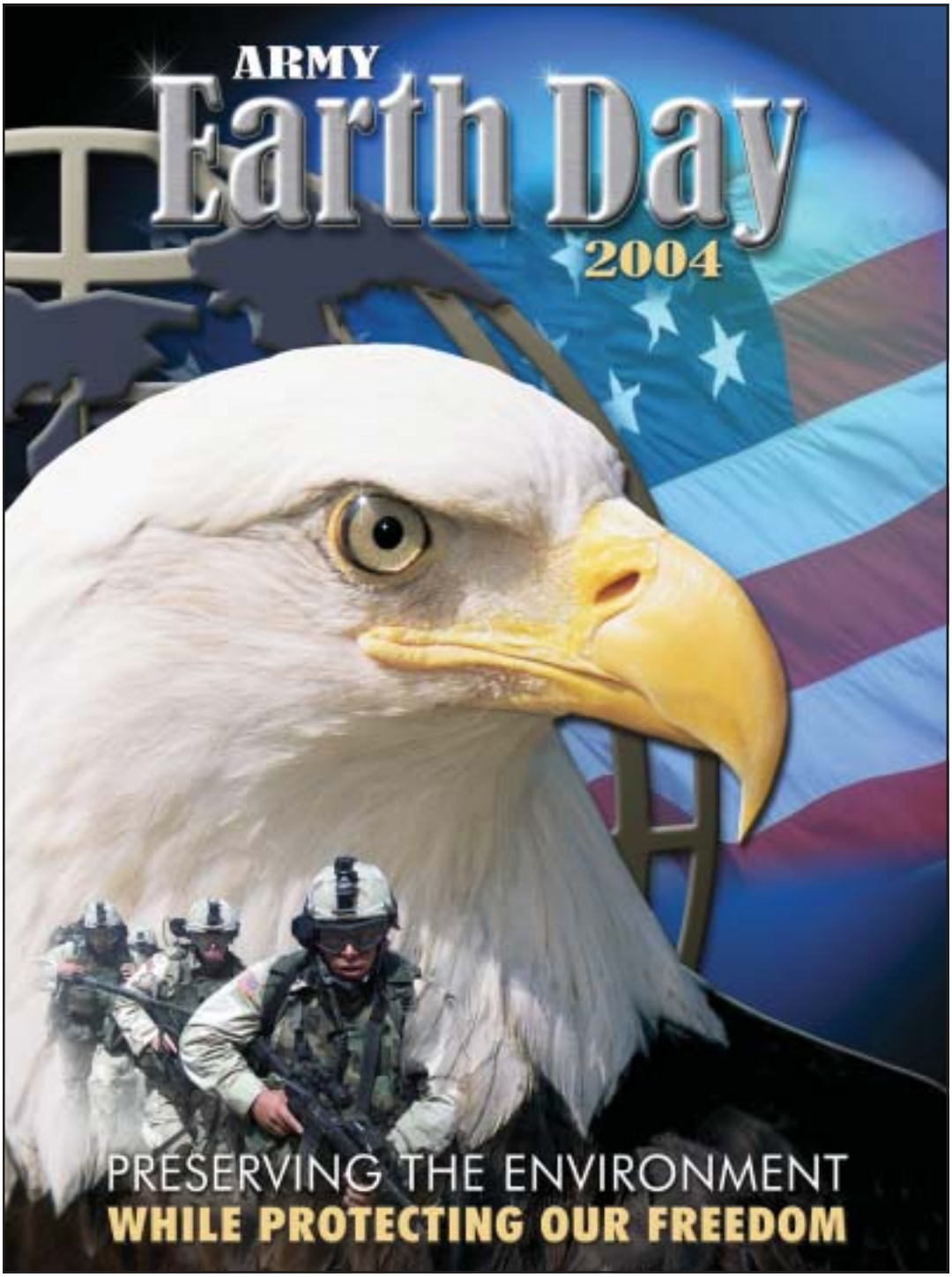
US Army Corps of Engineers ®

The Corps Environment

April 2004 Vol. 5, No. 2

Corps celebrates Earth Day



Later this month, we will join the nation in observing the 34th annual Earth Day celebration. U.S. Army Corps of Engineers employees will be on the front lines of numerous Earth Day activities: planting trees, picking up trash and litter from waterways and wetlands, and educating the younger generation on the importance of taking care of the environment.

Once again, the Army's Earth Day theme is, "Preserving the Environment While Protecting Our Freedom." It is an important reminder that the U.S. Army and the Corps contribute to the security, stability and sustain-ability of our nation and other nations around the world.

This year's Earth Day observance will mark my fourth and last one with you. For three and one-half years, I've been privileged to witness all that you are accomplishing for this nation and the environment. Daily, you contribute to our nation's environmental health by incorporating the Environmental Operating Principles into our work and seeking sustainable solutions to our nation's tough problems. Let me share just a few of our ongoing efforts and accomplishments in support of the environment:

- We are part of an unprecedented effort to develop long-term, large-scale ecosystem restoration strategies for the Everglades and coastal Louisiana.
- We continue our partnership with the EPA on numerous initiatives, including efforts to restore our nation's Brownfields and Portfields.

See Earth Day on Page 2

US Army Corps of Engineers ®

The Corps Environment

is printed quarterly by the U.S. Army Corps of Engineers as an unofficial newsletter published under the provisions of AR 360-1. The purpose of this newsletter is to provide information about Corps environmental actions, issues, policies and technologies. Opinions expressed are not necessarily those of the U.S. Army. Inquiries can be addressed to U.S. Army Corps of Engineers, Attn: CEHNC-PA, P.O. Box 1600, Huntsville, AL 35807-4301. Phone: (256) 895-1235 or fax (256) 895-1689. Circulation 1,200

Lt. Gen. Robert B. Flowers
Chief of Engineers
Publisher
Carol Sanders
Corps Public Affairs Officer
Stacey Hirata
Executive Editor
Dan Coberly
Candice Walters
Managing Editors
Troy Darr
Editor
Joan Burns
Editorial Assistant

Submissions

The Corps Environment welcomes submissions. Please send your information (article, photos, events, letters to the editor, etc.) or questions via e-mail to: Troy.D.Darr@HND01.usace.army.mil

Deadline for publication:
Feb. 15 (April issue)
May 15 (July issue)
Aug. 15 (October issue)
Nov. 15 (January issue)
All submissions are subject to editing.

The Corps Environment is available on the World Wide Web at:hq.environmental.usace.army.mil/newsinfo/current/current.html

Corps gets communities of practice

By CANDY WALTERS
HQ USACE

As the U.S. Army Corps of Engineers changes how it is organized and how it conducts business as part of the USACE 2012 initiative, 22 new Communities of Practice are emerging within the Corps.

One of them, the Environmental Community of Practice, is comprised of potentially several thousand Corps employees – anyone who shares an interest in the environmental programs the Corps manages or supports is a potential member. Some would argue that as the Environmental Operating Principles are continually embraced, the Environmental Community of Practice will soon be 35,000 strong, as every person in the Corps becomes part of the community of practice, said Patricia A. Rivers, chief of the Environmental Community of Practice.

All environmental programs within the Corps will be included within the Environmental Community of Practice. One of the community's main missions will be to serve as the champion for integrating and implementing

See Communities on Page 14

Earth Day

Continued from Page 1

Work also continues with EPA and other organizations on the Urban Rivers Restoration Initiative. One pilot project, along the Anacostia River in Washington, D.C., involves 25 agencies and organizations working on both hazardous substances removal and restoration efforts.

■ With The Nature Conservancy, we are collaborating on a Sustainable Rivers initiative. At Green River Lake in Kentucky, our joint effort restored a more natural seasonal river flow without impacting the authorized project purpose of flood control. The change has helped spawning fish and mussel species.

■ In Lincoln, R.I., a former drive-in theater is being transformed into wetlands that provide shelter to waterfowl, birds and other wildlife. It is the first aquatic ecosystem restoration effort within the Blackstone River Watershed, which is an American Heritage River.

■ In Prewitt, N.M., the Baca/Dlo'ay Azhi Consolidated Replacement School became the first Corps building to receive a Leadership in Energy and Environmental Design certified rating.

■ Environmental restoration efforts on Annette Island, Alaska, earned the Secretary of the Army's 2003 Environmental Award for Environmental Restoration.

■ Our efforts are assisting other nations as well. Right now we are supporting the U.S. Agency for International Development by preparing a water management model that may assist in the restoration of Iraq's marshes.

I've mentioned only a few of the Corps' many outstanding efforts and accomplishments. Across the Corps, projects such as the Indianapolis Waterfront renovation and the Napa, Calif., flood control project reflect the sustainable focus that both we and our customers want. And in the future, the 21st century Corps will do even more. Projects will use energy efficient, dual-fuel vehicles; reintroduce native plant species; develop non-structural flood protection measures; and increase use of "green" building design.

We are privileged to have an opportunity to make a difference in the life of this nation. As you continue your great work, I challenge you to always look at your work through the lens of our Environmental Operating Principles. I'm confident that with your help, the U.S. Army Corps of Engineers will leave a valuable legacy of environmental stewardship, one that our children and grandchildren will be able to enjoy.

Essayons!

ROBERT B. FLOWERS
Lieutenant General, USA
Commanding

Correction

The new Engineer Regulation for the Environmental Operating Principles discussed in an article in the January 2004 edition of *The Corps Environment* had the wrong number. The new ER is 200-1-5. It is available on the U.S. Army Corps of Engineers Headquarters Web site at /www.usace.army.mil/inet/usace-docs/new-pubs/newer's.htm. Also available at that Web site are the Commander's Policy Memorandum #12 that discusses implementing the Environmental Operating Principles and the Headquarters Program Management Plan to Implement the Environmental Operating Principles.

We regret the error.

District commanders learn about leaving a legacy

By CANDY WALTERS
HQ USACE

Time Magazine called him a "Hero for the Planet," but those U.S. Army Corps of Engineers district commanders who listened to him on Jan. 22 may instead call William McDonough a cheerleader for the Corps of Engineers.

McDonough, a world-renowned architect, designer and former dean of the University of Virginia School of Architecture, said the Corps has an opportunity "to go beyond what is required, to leave a permanent imprint in the communities" in which its offices are found.

"With the work you do, you have the opportunity to give an exquisite gift to the nation. You just need to be strategic with it," he said.

In his 90-minute presentation to the District Commanders Conference Jan. 22 at Corps headquarters in Washington, D.C., McDonough shared his ideas of how the Corps, as well as everyone around it, plays a role in designing a world that belongs to the living.

Many people today talk about "sustainable development," which the United Nation's 1972 Brundtland Commission report said "… is the ability of present generations to meet their needs while allowing future generations to meet their own needs." However McDonough, who in 1996 received the Presidential Award for Sustainable Development, said that "if sustainability is a maintenance agenda, it's not that exciting."

Instead, he said, people should seek an end game of "a renewably powered world, full of safe and healthy things, economically, equitably, ecologically and elegantly deployed."

People tend to focus on "being less bad" by recycling and reusing poorly designed products. "Being less bad is not being good," McDonough said. "A manager's job is to be efficient. An executive's job is to be effective and do the right thing. It's more important to do the right thing right than the wrong thing right. This can apply to your mission."

One way it can apply is by designing projects that achieve their goals without being subject to regulations, he said, adding that "having to have something regulated is a signal of design failure."

McDonough said that instead of a cradle-to-grave scenario where you take materials, make something and then waste it, people and businesses need to instead try for cradle-to-cradle cycle, where they create goods and services that have ecological, social and economic value.

The 2002 book he co-authored with Michael Braungart, "Cradle to Cradle/Remaking the Way We Make Things," is printed on "paper" made of plastic resins, a polymer, and can be used, recycled and used again without losing any material quality. It demonstrates the cradle-to-cradle cycle and what he calls "eco-effectiveness," where you measure your legacy, not your activity.

McDonough said he believes the business can be part of the solution, just as the Corps of Engineers can. "We just need to rethink some of our plans. There are ways to optimize the relationship between humanity, nature and technology," he said.

In 1992, McDonough and Braungart, developed "The Hannover Principles," to address ways to optimize the relationship. "They all have to work with each other," he said. The Hannover Principles recognize the rights of humanity and nature to co-exist, the interdependence that man shares with nature and proposes a relationship that calls on man to protect nature.

The nine principles, which have been studied and adopted throughout the world, also serve as the foundation for the Corps of Engineers' own Environmental Operating Principles, a document that McDonough said reflects how the Corps can "leave the world a better place than you found it."

"Mr. McDonough's presentation demonstrated the embodiment of what can be achieved through a holistic implementation of our Environmental Operating Principles," said Col. Richard G. Thompson, Los Angeles District Engineer. "We have been conditioned to mitigate for the environmental impacts of our projects. Mr. McDonough's approach is to adopt a life-cycle orientation and create projects that produce positive impacts to the environment and eliminate the need for mitigation.

"He has shown that it is possible to make this approach the most cost effective. After seeing his approach, I saw new opportunities for projects that are currently being formulated," Thompson said.

"If we could do half the things he talked about, we would leap ahead in applying our Environmental Operating Principles," said Japan District Commander Col. John McMahon. "Just one example of how he can get thoughts flowing was the discussion of the simple idea of how we pave parking lots. It's phenomenal. It was the most simulating talk I've heard in years."

McDonough's ideas hit home with the business world since they are grounded in sound business practices. "The presumption in the business world is that by being sustainable you're just adding costs," McDonough said. "We need to turn that on its head."

And that's exactly what he and his associates have done for numerous corporations – Ford Motor Company where its Dearborn, Mich., plant has "the world's largest green roof" and a porous parking lot, Gap, Nike, the Miller SQA factory in Michigan, and Ciba-Geigi in Switzerland among others.

"When we talked to Ford, we gave a presentation based on costs. Our system would save $35 million and that's all they needed to know," he said. "And we were able to do some healing of the planet while adding more habitat for birds. We now have autoworkers listening for different birds. It's all cost effective."

For McDonough, the task is simple – "our precise goal is to make the world a better place." It's a task and a goal that people in the Corps of Engineers can embrace.

Want sustainable infrastructure?

By JANE MERGLER
Brownfields/Portfields program manager and SWD RIT team member

Watching William McDonough in action is like watching a caldron of imagination brought to its boiling point by the churning ideas. It's like watching a barrage of ideas whirring past and hitting the sound barrier.

Whether speaking about design, human history or ingenuity, or where best to place wind turbines, McDonough immerses himself in all possibilities and often has a bit of fun in the process with the people who may have been curious enough to go along for the ride.

Engineers, architects and planners immerse themselves in problems, too. We visualize solutions. We tinker. We might even experiment. We also tend to stick to the territory we know best, hardly ever roaming outside of those areas in which we have grown familiar.

But 15 minutes into any talk by McDonough, we "in-the-box" types have

See McDonough on Page 14

Baltimore earns OE design center status

By MARY BETH THOMPSON
Baltimore District

Baltimore District joined an elite group Sept. 22 when the Corps of Engineers Headquarters named it an Ordnance and Explosives Design Center (OE).

For years the Engineering and Support Center at Huntsville was the Corps' only OE Design Center, but three new centers have recently been added: Omaha District, South Pacific Division and Baltimore.

"Each design center has full authority to support OE missions," said Greg Johnson, assistant chief of Engineering Division. "Baltimore also has the overseas aspect."

The Corps increased the number of OE design centers in response to its expanding role in ordnance cleanup. Additional assets were needed to handle the bigger workload, he said.

"One of the things you need to have is OE safety specialists. We have four," Johnson said. Other teams elements will come from Contracting; Counsel; Programs and Project Management; Public Affairs and Engineering's Geotechnical, Cost Engineering and Hazardous, Toxic and Radioactive Waste branches.

"We've got a lot of very experienced people," he said.

Baltimore District has been an ordnance and explosivesremoval action district since 1991.

As a design center, the district can now manage OE environmental cleanup projects through all phases: study, decision making, design, contracting and monitoring.

"They've built up a lot of good experience over the years with removal actions and working with a variety of customers," said Carol Youkey, chief of the Huntsville Center Ordnance and Explosives Center of Expertise. "Adding Baltimore as a design center puts us right where we need to be to handle the workload."

For more information contact the Baltimore District Public Affairs Office at (410) 962-4088.

McDonough

Continued from Page 3

moved to the edge of our seats and the skepticism has disappeared from our faces.

Why does this happen when people listen to William McDonough, Alan Atkinson or anyone of the slew of green designers? I think because people are won over by good ideas, particularly when the good ideas are ones that we can practice in our own lives.

But what does this have to do with helping make America's vast water, waste and transportation infrastructure more sustainable? Only that there are a growing number of people both inside and outside of the Corps who are exploring and practicing the field of green design.

How, after decades of practicing extraction and unsustainable use of fossil fuels, can green design be possible? Well, here are a handful of examples of eco-friendly, green design that major corporations like Nike, Ford Motor Company and a few others are using. If it can happen with those companies, it can happen in Corps, too.

■ **Gap Corporation Headquarters, San Bueno, Calif.**

Thirty percent more energy-efficient than required by California law, this building features daylighting designs that reduce the use of electrical lighting and associated cooling loads: each of the building's three bays of offices and workstations is built around a two-story, landscaped atrium. On the roof of each atrium are windows oriented to the northwest and southeast. A curved reflector redirects daylight from these windows into the open office workspace.

At nearly 50 feet high and containing open staircases for easy circulation between the two floors, the center atrium spaces facilitate circulation between the building's two floors. All interior wood and wood veneer used in the building is from certified, sustainably managed forests. Office workstations and floor coverings are made from materials that have low-toxicity.

Photo by Marti Hendrix

William McDonough

The roof is undulating and planted with native grasses and wildflowers so that storm water runoff is absorbed and thermal isolation for the building's interior is provided.

■ **Ford Motor Company historic River Rouge Plant, Dearborn, Mich.**

Some 1,100 acres in size, Ford aims to transform their River Rouge plant into a sustainable manufacturing facility that will improve air and water quality while boosting employee morale and productivity.

The roof of the assembly plant will be covered with an ivy-like plant to reduce storm water runoff, convert carbon dioxide into oxygen and serve as a natural insulation.

A system of swales, or landscaped ditches, along with retention ponds will be used to clean storm water. Natural plants will be used to cleanse contaminated soil that can be found around the property while renewable energy sources such as fuel cells and solar cells are to be incorporated into the project.

■ **Making America's only national rail passenger system more sustainable**

McDonough has mused aloud about the idea of placing wind turbines along portions of the 22,000 miles of rail lines that Amtrak either owns or leases, enabling Amtrak to provide not only rail service but also energy production. Best placement? Across the Great Plains from Texas to North Dakota where the preponderance of the nation's wind power potential blows. The wind-generated electricity could power the third of Amtrak's locomotives that have electric engines, while the surplus could be sold back into the grid.

So what do these examples illustrate? Whether we're helping U.S. communities solve regional water supply challenges or helping a developing nation plan or restore their infrastructure, these examples show that we can't just hope for a better, more sustainable future, we must design it. After all, human and environmental health, the strength of our economy, and the security of our nation will require it of us.

Rappahannock flows freely after 150 years

By NANCY ALLEN
Norfolk District
and CHRISTOPHER AUGSBURGER
Baltimore District

FREDERICKSBURG, Va. -- Explosives set by the U.S. Army and U.S. Air Force Reserves blasted a 130-foot section in the middle of Embrey Dam on Feb. 23, allowing the Rappahannock River to flow freely for the first time in more than 150 years. Senator John Warner (R-Va.) gave the firing order shortly after noon as part of a ceremony that marked the first step in a plan by the U.S. Army Corps of Engineers, Norfolk District to completely remove the dam.

The detonation opened 10 holes in the structure, allowing for fish to pass through as part of their natural migration cycle. While this fist step has an immediate impact on fish migration, canoeists and kayakers will have to wait to traverse that part of the river until the area has been cleared of enough debris to allow safe, free passage.

"I have looked forward to this moment for some time, and am proud to play a small part in this historic event," said Warner. "As a result of today's event, fish will be able to swim unhindered from the Chesapeake to the Blue Ridge, and generations that follow us will be better able to enjoy all that the Rappahannock has to offer."

The removal of Embrey Dam will restore 106 miles of fish spawning and rearing habitat in the Rappahannock and Rapidan rivers.

Chesapeake Bay Program Director Rebecca Hanmer attended the ceremony and commented on the environmental benefits of the breach.

"The removal of Embrey Dam is the 123rd successful fish passage project for Bay Program partners," Hanmer said. "By reopening more than 1,300 river miles to migratory fish in the Chesapeake Bay watershed, we are allowing American shad and river herring to reclaim their native waters as part of our concerted effort to restore the life of the bay," she said.

The city of Fredericksburg first built a crib dam on the river in 1853, before construction of the 22-foot-high, 770-foot structure in 1910, which was used to generate hydroelectric power until the 1960s. Fredericksburg also used water diverted by the dam into the Rappahannock Canal as a raw water source for the city's supply until early 2000. Because of the dam's lack of usefulness and state of disrepair, federal, state and local officials have worked with environmental and conservation groups for years to remove the dam and reopen the river

Embrey Dam is the largest dam to be removed in the United States since 1999, when the Edwards Dam was removed from the Kennebec River in Maine. It was also the largest intact dam on the mainstem, making the Rappahannock one of the longest free-flowing rivers in the continental United States.

"The Corps is well known as a builder of dams," said the Honorable John Paul Woodley, assistant secretary of the Army for Civil Works. "But the removal of Embrey Dam not only spotlights our increasingly important environmental restoration mission but gives the 'citizen soldiers' of the Corps a chance to support its military customers by providing a real-world training exercise to the men and women of our armed forces."

Demolition experts and dive teams from the U.S. Army and U.S. Air Force Reserves used the breaching of Embrey Dam as a real-world, joint training exercise.

Virginia Secretary of Natural Resources Tayloe Murphy, a long-time supporter of the Chesapeake Bay, noted that the numerous partners in the project make the breaching of Embrey Dam somewhat unique.

"Commitment and cooperation have been the hallmarks of this effort. To join resources with these other dedicated federal and local officials — preservation and conservation groups, all working towards the goal of opening these waters — is tremendous. This project is an excellent example of the partnerships that will be necessary to achieve our other Bay Program goals, especially those involving water quality improvements," said Murphy.

Brian Rheinhart, Embrey project manager for the Norfolk District, also highlighted the unique partners in the project. "In my 23 years as a civil engineer with the Corps, this project has been not only the most challenging of my career but the most unique because of all the different partners it brought together, including not only city, state and federal agencies but military and environmental representatives at every level." He also credited the internal Norfolk District team for their years of work and their environmental and technical innovations on the project.

The remaining sections of the dam will be removed by mechanical means sometime after June 30. The project is scheduled for completion in February 2006.

For more information contact the Norfolk District Public Affairs Office at (757) 441-7606.

Photo by Christopher Augsburger

Clouds of debris spew from Embrey Dam as U.S. Army and U.S. Air Force Reserves blast a section away in the first of several planned stages of removal of the dam.

UXO technology program garners national award

By MICHAEL DILLAPLAIN
Environmental Contractor

USAEC file photo

A team tests a prospective UXO detecting system on the Standardized UXO Technology Demonstration Site on Yuma Proving Ground, Ariz.

The Army's Standardized Unexploded Ordnance (UXO) Technology Demonstration Sites Program received the Strategic Environmental Research and Development Program (SERDP) Project of the Year Award in the UXO category on Dec. 2 in Washington, D.C.

It is a collaborative effort spearheaded by the U.S. Army Environmental Center headquartered at Aberdeen Proving Ground, Md., in cooperation with the U.S. Army Aberdeen Test Center, the U.S. Army Corps of Engineers, the U.S. Army Environmental Quality Technology Program, the Environmental Security Technology Certification Program and SERDP.

Each year SERDP honors programs in five environmental categories with its Project of the Year Award. The selected projects are exemplary research and development efforts resulting in significant technological benefit to the Department of Defense environmental programs.

"This program meets a major challenge to DoD's UXO program by developing standards of testing widely recognized and acceptable to regulators and the rest of the UXO community," said Jeffery Marqusee, SERDP's technical director. "The technology demonstration sites will play a major role in developing and transferring new UXO detection and discrimination technologies in the future."

For decades, soldiers and weapons developers have gone to ranges and training areas to train with and test bombs, projectiles, grenades and other munitions.

A portion of these munitions did not function as designed, becoming what is known as UXO. Over the years, UXO has accumulated from these activities at an estimated 1,700 formerly used defense sites, 25 base realignment and closure sites and a number of active installations covering millions of acres.

One major barrier to cleaning up these sites is the lack of adequate technology to reliably detect UXO and discriminate between the UXO and non-hazardous materials common to the ranges and test areas.

Failure to discriminate between UXO and non-hazardous materials such as shrapnel, target parts or munitions parts result in a high percentage of false alarms that add significantly to the amount of required excavation, driving up the costs and time required to clean up a site. Even modest advances in technologies may save the Army millions of dollars in clean-up costs.

The Standardized Unexploded Ordnance Technology Demonstration Sites Program is designed to help promote the development of these technologies. It maintains two technology demonstration sites; one at Aberdeen Proving Ground, Md. and the other at Yuma Proving Ground, Ariz.

The program provides realistic technology demonstration sites, protocols and targets for technology testing and performance.

A standardized, automated scoring process has been developed to document the performance of UXO detection and discrimination sensor and platform systems. This removes subjective evaluation and allows for objective performance comparisons between system platforms across varied test conditions.

"The award is the culmination of a lot of hard collaborative work by a team formed from members of many different agencies," said George Robitaille, program manager for the project.

For information contact the USAEC Public Affairs Office at (410)436-1655, or by email at usaecpao@aec.apgea.army.mil

Program sponsors workshop on water resource management

The Engineer Research and Development Center's (ERDC) Water Operations Technical Support Program is sponsoring a workshop entitled "Water Resource Management: A System-Wide Approach To Integrating Watersheds and Reservoir Systems."

The workshop, planned for Kansas City, on May 4-6, includes a variety of technical presentations on watersheds and reservoirs from a systems perspective, lakes and reservoirs as system integrators, the assessment of watershed, reservoir, and stream and tailwater processes, watershed and in-reservoir enhancement techniques.

Steve Ashby and John Hains, Environmental Laboratory, and Steve Wilhelms, Coastal and Hydraulics Laboratory, ERDC Waterways Experiment Station will conduct the workshop.

A water quality management handbook will be provided on CD to all workshop participants.

For more information or to register for the workshop contact Laurin Yates at (601) 634-3792, e-mail yatesl@wes.army.mil, or visit chl.wes.army.mil/training/lectures/wqual04.

Alaska District garners 2nd Army award

By PAT RICHARDSON
Alaska District

Photo by Jennifer Cohen

The Alaska District is cleaning up a water treatment plant atYellow Lake Reservoir on Annette Island in southeast Alaska.

For the second year in a row, the Alaska District, U.S. Army Corps of Engineers, has won a Secretary of the Army Environmental Award. The Alaska District is receiving the 2003 award in the Environmental Restoration Team category for cleanup on Annette Island, the only autonomous Indian Reserve in Alaska. Alaska District received the 2002 award in the Cultural Resources Management category.

Both projects are part of the Formerly Used Defense Sites program to reduce physical hazards and dangerous chemicals from former military sites.

The Annette Island site was a major stopover point for aircraft flying from the lower 48 states to Alaska during World War II. It is located 900 miles southeast of Anchorage, Alaska's largest city, and 700 miles north-northwest of Seattle, Washington. Even today, air travel between Ketchikan, the nearest airport, and Annette Island is intermittent. During the war the small island contained a naval facility, infantry training facilities, a coastal defense system and two runways with support facilities.

Island land belongs to the U.S. Department of Interior and is held in trust for the Indians by the Bureau of Indian Affairs. The Indians are Tsimshian who migrated from Metlakatla, British Columbia, in 1887 seeking religious freedom.

The FUDS project sites include a 52-bed hospital, five garrison housing sites, three small arms firing ranges, several gun emplacements, a saw mill, above ground and underground tanks, miscellaneous drum landfills, a White Alice communication site, a water purification plant, and one site where divers searched for ordnance but found none. The main sources of contamination were polychlorinated biphenyls, heavy metals such as lead and liquid mercury, fuel, and solvents.

Photo by Time Rath

Locally hired worker wears mosquito netting over his face as he decontaminates a stainless steel bowl prior to sampling activities at the Department of Defense sawmill site.

To date 65 tons of contaminated soil have been removed and four pounds of liquid mercury have been recovered and recycled. Ten sites are in the closure process. Work on the remaining sites will continue for up to three years.

The Alaska District's Annette Island Project Delivery Team overcame challenges of coordinating work with many parties including the sovereign Indian community, landowners, responsible parties, stakeholders and regulatory agencies. A further challenge was the logistics of getting personnel and equipment to the remote island.

"Each party came with different schedules, approaches to site cleanup and definitions of success," said Robert Johnston, Alaska District's project manager.

The PDT developed a program management

See Alaska on Page 15

Better 'mousetrap' wins weed war

By GAY MONTEVERDE
Freelance writer

Photo by Bob Heims

At the Corps' Dorena Dam, a well-fed worker chows down.

Sometimes the best mousetrap is…well, a cat. The best solution to a problem may not be the newest design, the most expensive materials, or the most complicated construction.

When the problem is one that has plagued mankind since the beginning of time—like weeds—sometimes the answer is found by looking backward, not forward.

What did our ancestors do before Weed Wackers were invented? Before herbicides? Before landscaping was big business? They used good, old-fashioned common sense…and goats.

That was what the U.S. Army Corps of Engineers staff members discovered when they put on their thinking caps.

The Corps' Dorena Dam in Oregon's Willamette Valley is an earth-fill dam, 2,600 feet long and 145 feet tall, which impounds the 1,800-acre Dorena Lake. It's a flood control facility on the Row River, a tributary to the coast fork of the Willamette River near Cottage Grove, Ore.

On the upstream side of the dam, the lake is blue and filled with boaters, anglers and swimmers through much of the year. Trees and grassy picnic areas nuzzle the shore, and tall mountains encircle the horizon. As with many earth-fill dams, the downstream side of the dam looks like a big pile of dirt.

Any weekend gardener knows what happens when you have a large, open area of dirt: things grow on it. In the case of the Dorena Dam, each year the face of the dam becomes overgrown with pea vines (*lathyrus polyphyllys*), blackberries, Scots Broom, and assorted small woody vegetation like maple and poison oak.

When the vegetation becomes too thick, the Corps of Engineers, which built and operate the dam, can't see the dam face to visually inspect for damage such as rodent holes or dangerous abnormalities. In fact, dam safety guidelines require the Corps to keep all woody debris with stems of one inch or larger off the face of the dam.

Since its construction in 1949, a number of options have been used to rid the dam of vegetation. For decades, the Corps relied on the magic of modern science, but there are numerous downsides to the use of herbicides—from the costs involved in training staff in the application of toxic substances to pesticide reporting requirements and an increasingly negative public image. Burning also was risky and controversial. In the last decade, inmate crews from local prisons were hired to do the job by hand. But even with guys who have a lot of time on their hands, weeding takes forever and costs mount.

After half a century of struggling with the problem, the Corps decided to go back to the drawing board. A "vegetation management group" was formed last year to look at ways to solve the weed problem at Dorena Dam. Included in the group were park managers like Herschel Henderly and botanists like Wes Messinger. They were looking for a new alternative, something environmentally friendly, reasonably priced, easy and effective. What they discovered was a "cat" that would rid the area of its "mice."

By all reports, Ken Duncan, environmental compliance coordinator for the Corps' Willamette Valley Projects, first said the magic word: "goats." As the group began to talk about this option, enthusiasm rose. Goats! Easy on the environment. No safety issues. No training required. No complaints about back-breaking work. To goats, clearing vegetation is dinner at an out-of-town restaurant.

Duncan got the green light to find a herd of goats, but it took him another six months to find someone to do the job right. Eventually, Duncan's wife Kari, who works for the Eugene Water and Electric Board, mentioned they had recently hired a goatherd to clean vegetation off one of their dams. In July, Duncan contacted Western Weed Eaters out of Lusk, Wyo.

"We wrote up a contract to do the 9.2 acres on the downstream face of the dam," Duncan said. "When they arrived in September, a few days early, they offered to start on the upstream dam face…for free. The goats were hungry."

Sarah and Jay Harris, the goats' owners, travel and live with their goats. The family-run business includes nephew Jared Blair, niece Jenna Blair, and two employees.

The herd is 750 Spanish meat goats originally brought to the U.S. from Spain and domesticated over the last few centuries and Boer goats, South African goats available in the U.S. for about nine years.

They are "meat" goats rather than dairy goats, a differentiation similar to that between dairy and range cattle. Like range cattle, meat goats are tough, sturdy little creatures who eat anything and thrive.

According to Sarah Harris, what makes goats perfect for the job of weeding is that they are browsers, like deer and elk, not grazers like cows.

"Grazers stand and eat," she said. "They bite off the plant at the bottom. Goats start

See Goats on Page 15

Corps historic area fish tagging study could net valuable data

By JOANNE CASTAGNA
New York District

Below the waters off the coast of New Jersey, fish are busy moving about as they assist the U.S. Army Corps of Engineers in a complex fish tagging study that could net valuable data for the Corps and environmental community.

For more than a century, the New York District has dredged the channels within the Port of New York and New Jersey to help facilitate navigation crucial to our economy. The fine-grained sediments that accumulate on the bottom of the channels can cause shoaling and interfere with safe navigation.

Historically, dredged material from the port has been disposed in the Atlantic Ocean in and around a 2.2 square nautical mile area off the shore of New Jersey commonly referred to as the Mud Dump Site (MDS).

In 1997, the U.S. Environmental Protection Agency terminated the use of the MDS and redesignated the site and surrounding area that was historically used to dump dredged material as the Historic Area Remediation Site (HARS).

The HARS is an approximately 15.7 square nautical mile area 3.5 nautical miles east of Highlands, N.J., and 7.7 nautical miles south of Rockaway, N.Y.

Only dredged sediment that has been tested and meets EPA's strict biological and chemical criteria can be used as remediation material. These sediments are placed in the HARS to cover dredged materials previously placed there.

The cap -- one meter in thickness -- remediates the site and improves the habitat conditions for aquatic life in the HARS by covering historic sediments whose contaminant levels may potentially cause environmental concern.

"The criteria used to determine whether dredged sediment can be placed at the HARS are among the most stringent in the United States," said Monte Greges, chief of Dredged Material Management Section, New York District.

To evaluate the potential changes the EPA proposes to make to the current criteria, the New York District initiated and is funding a fish tagging study that is being conducted and managed by the Corps' U.S. Engineer Research and Development Center - Waterways Experimental Station, in the Vicksburg District. The Waterways Experimental Station contracted the Northeast Fisheries Science Center to perform the study that will determine the residency time of fish in the HARS.

The 18-month study began in the summer of 2003, and 153 healthy adult fish were tagged in the HARS. Included were 129 black sea bass (*Centropristis striata*) and 24 summer flounder (*Paralichthys dentatus*), also known as "fluke," important recreational and commercial fish.

The fish were tagged with an ultra-sonic transmitter that was surgically implanted in their abdominal cavities and an external tag placed below their dorsal fins. The external tags are labeled "Not for Human Consumption" on one side and have the study manager's phone number on the other.

To pick up the signals from the ultrasonic transmitters, 72 receivers were strategically moored throughout the HARS site, 800 meters apart. According to Mary Fabrizio, the study's principal investigator and chief of the Behavioral Ecology Branch, Northeast Fisheries Science Center, "The signals produced by the transmitters will be detected by the receivers when a fish swims within 400 meters of the receivers."

"Every signal detected by a receiver is 'decoded' electronically and the receiver records the identification number of the transmitter, the date, and the time of day the signal was detected and stores the records in the memory of the receiver. When the receiver is retrieved, scientists download the data to a laptop computer."

"Based on retrievals completed in September 2003, we know that over a period of about three months, 68 receivers detected over 1.3 million transmissions," she added.

In June 2004, the study will be completed and the scientists will retrieve the receivers for the last time and download the remaining data. A final report will be completed in December 2004.

"In addition to providing a better estimate of residency time of these two fish species at the HARS, this study will also provide data to correlate fish movement and behavior with changes in bottom topography from disposals, changes in water temperature and salinity and storm events," Greges said. "This will be extremely helpful to fishery biologists.

"This study will also help the New York District develop an environmental risk assessment for the HARS that will more realistically portray the effect that certain contaminants have on aquatic life," Greges added. "Knowing how much time fish spend in the HARS will provide information on the potential level of exposure."

"Most tagging studies of this kind are relegated to bays, lakes, streams and other relatively small 'closed areas.' This study is the only one performed in a mid-Atlantic continental shelf area and may be the largest study of this type ever performed. The amount of technical data that can be gleaned from it is unprecedented," Fabrizio said.

For more information contact the New York District Public Affairs Office at (212) 264-9113.

The transmitter covered in beeswax is inserted into the peritoneal cavity of fish.

Incision is closed and a cyanoacrylate bond is applied.

Fish are released and tracked by signals from ultrasonic transmitters.

Photos: Northeast Fisheries Science Center

Project receives presidential award

By MARSHALL HUDSON
Baltimore District

The Poplar Island Environmental Restoration team has known for a long time that it is working on an important project.

That belief was formally confirmed recently when President George W. Bush and the Coastal America Partnership recognized the team with the 2003 Coastal America Partnership Award, an honor given to multi-agency projects for outstanding efforts in protecting and restoring coastal resources.

John Paul Woodley, assistant secretary of the Army for Civil Works, presented the award on behalf of the president and the Coastal America Partnership at a special ceremony at the Chesapeake Bay Beach Club in Stevensville, Md., Nov. 3.

Accepting the team plaques were Col. Robert J. Davis Jr., commander of the U.S. Army Corps of Engineers, Baltimore District, and Trent M. Kittleman, deputy secretary for the Maryland Department of Transportation.

"The Army Corps of Engineers is proud of the Poplar Island project because it is about finding a win-win solution to a tough problem. It's about responsible stewardship of our environment, and most of all, it's about teamwork," said Davis.

Poplar Island, which had eroded to less than four acres in 1999, is now a dredged material beneficial-use placement site. The island is being restored to its approximate 1847 footprint of 1,140 acres with the placement of clean dredged material taken from the approach channels to the Port of Baltimore.

When complete, 570 acres of the island will be upland habitat, and 570 acres will be wetland habitat.

The island is already providing important nesting areas and habitat for native waterfowl and a variety of other wildlife species, even though the project is ongoing.

As a symbol of that success, the Maryland Environmental Service had several diamondback terrapin hatchlings in an aquarium at the ceremony. Terrapin nesting habitat is threatened due to shoreline development and erosion, but over 1,000 hatchlings have emerged from nests at Poplar in the past two years.

Individuals from many federal, state and local governments and private organizations involved with the project were also honored. Corps members Scott Johnson, Jeff McKee, Wes Coleman, Stacey Brown, Mark Mendelsohn, Thomas Myrah, Michael Snyder, Barry Cortright and Brian Walls, as well as former Corps member Jim Johnson, all received plaques and a congratulatory letter from the president for their work on the project.

Photo by Susanne Bledsoe

Poplar Island, Stevensville, Md., provides important nesting areas and habitat for native waterfowl and a variety of other wildlife species.

Prior to the ceremony, Davis and Poplar Island Program Manager Scott Johnson gave Congressman Wayne T. Gilchrest, Woodley and acting North Atlantic Division Commander Col. John P. Carroll a tour of the project. Arriving by Blackhawk helicopter, the group had the opportunity to see the project from both the air and the ground.

The assistant secretaries of the federal agencies in the Coastal America partnership select nominations for this award.

Some of the other agencies and groups recognized at the ceremony were the Maryland Port Administration, Maryland Department of Natural Resources, Maryland Environmental Service, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, U.S. Environmental Protection Agency, Talbot County, Maryland Watermen's Association and the Maryland Ornithological Society.

Although unable to attend the ceremony, Sen. Paul S. Sarbanes also congratulated the team. His letter read in part, "The Poplar Island project has proven that environmental and economic goals can work hand in hand. Poplar Island created a sea change in the traditional approaches that had been taken to disposing of dredged material. It is only fitting that this project is being recognized for these achievements."

For more information contact the Baltimore District Public Affairs Office at (410) 962-7536.

Field analysis process saves more than $2 million

By RON FRERKER
St. Louis District

The Formerly Utilized Sites Remedial Action Program (FUSRAP) has the mission of cleaning up wastes left from the early days of the Atomic Age. At the heart of any hazardous, toxic or radioactive waste cleanup are chemical samples.

Samples are planned, collected and sent to the lab where the normal turnaround time for analysis is about four weeks. After the analysis, the remedial excavations are designed.

Upon removal of the contaminated soil, samples of the excavation are taken to demonstrate the completeness of the remediation. These samples are expedited through the lab with an increased cost, typically 50 percent or more.

Meanwhile, the excavation remains open, collecting water that may require treatment, potentially adding more costs. The longer the excavation is open, the higher the costs. There is also a tendency to over-excavate to assure that remedial goals are achieved and to prevent having to go back to remove more if the sample results are elevated.

Enter the use of field analytical measurements (FAM), which allow the HTRW team to achieve faster turn-around times which in turn can minimize the need to over-excavate. However, these field instruments are frequently not sufficiently sensitive at the level of detection needed to demonstrate that the contractor reached the cleanup action level.

For the St. Louis FUSRAP sites, some procedures have been found that allow us to optimize the use of FAM. Two radioactive contaminants of concern have sufficiently strong gamma emissions that they can be detected at concentrations close to the remedial action level with a sodium iodide detector.

A simple walkover with this instrument, coupled with a Global Positioning System unit, can produce a color-coded map indicating the levels of contamination. Actual samples are then taken, analyzed and specific isotopic ratios calculated such as radium-226/thorium-230.

This is done because the thorium-230 does not have a strong gamma signature. Using the field measurement and the ratio, the thorium can be estimated.

The team can now use the original sampling data to determine conservative gross cut lines for the excavation and then use the walkover data for those areas where contamination is still above action levels, eliminating over-excavation.

When the cost of transportation and disposal is over $200 per cubic yard, savings in over-excavation are an important part of the program.

Verification that areas have achieved cleanup goals requires samples with faster theoretical arrival times (TATs) than most labs could provide.

After a careful study of the cost of samples and a projection of the numbers, it was concluded that our own on-site lab would be a cost effective investment that would also give us the control over prioritization of sample analysis.

An on-site lab could produce definitive level samples in just over eight hours for the most arduous analyses and screening level samples in less than one, thus improving TATs drastically.

A modular building was designed, competitively bid and outfitted with the most effective equipment. This Corps-validated lab was designed for a high production rate of a very narrow range of analyses -- that is, geared exactly to our COCs and sample needs.

The process has been fine-tuned so that all radiochemical analyses are now accomplished on-site, including water discharges, verification of cleanup goals and air monitoring. Lab quality assurance samples are an obvious exception.

Sample analysis charges allow cost-effective pre-design investigation sampling and therefore design enhancement. Between 19 and 25 thousand analyses yearly have been run through our lab. Cost for an alpha spectroscopy sample is $140 versus about $290 from a contract lab. Likewise, gamma spectroscopy is $50 versus nearly $190 for contract cost. The lab has paid for itself more than once.

The success of the on-site lab led us to the implementation of satellite labs at our two major sites, the St. Louis downtown and St. Louis airport sites, to optimize the productivity of remediation contractors.

The limited capability labs produce primarily screening level samples, but they can be done with 15-minute counts and no sample preparation. The labs also support manifesting and disposal assessments, where much higher levels of detection are sufficient.

There is a difference between our two disposal sites, where one site can only take soil below the source level definition, but at a lower price. Satellite labs can determine the most cost effective disposal option.

In a recent investigative area, the district isolated 35,000 cubic yards of soil and sent them to the lower level facility at a savings of about $240,000. We have documented savings of $2.25 million compared to the contract lab costs. And that can bring a little tear of joy to the eye of a project manager.

For more information contact the St. Louis District Public Affairs Office at (314) 331-8002.

Photo by Ron Frerker

A radiochemist prepares to fuse the alpha spectroscopy sample taken at a FUSRAP site in a platinum crucible before counting.

Cooperation leads to success at former bombing range

For nearly 10 years members of the Badlands Bombing Range (BBR) project team have been working together to create a safe place to live and to protect the natural resources in the area of the former U.S. Air Force bombing site. Cooperation between several government agencies and the Oglala Sioux Tribe has been paramount in the team's achievements.

The former bombing range is located in the southwestern corner of South Dakota on the Pine Ridge Indian Reservation belonging to members of the Oglala Sioux Tribe. During World War II, the U.S. government acquired more than 340,000 acres.

When the U.S. government no longer needed the Badlands as a bombing range, the original landowners were given the opportunity to re-purchase and re-inhabit their land. However, the U.S. Air Force kept about 2,000 acres designated as the High Impact Area due to the heavy amount of bombing and resulting ordnance and explosives that remained there. The excess property was added to the Badlands National Park.

"When something like this happens to a group of people who have already had so much land taken away from them…it's terrible," says Emma Featherman-Sam, the BBR project team co-chairperson representing the tribes.

She said that in using the land and returning it in this condition, "the [U.S.] government showed that it did not value the lives of the people or land upon which they lived."

Because of the strong feelings for the land, the tribes took the initiative to restore the land and its natural environment. Members of the tribes met with representatives from the U.S. Army Corps of Engineers Omaha District, Ellsworth Air Force Base and the South Dakota Department of Environment and Natural Resources in May 1994 to discuss a grant application for funding to clear the lands of the hazardous ordnance.

The project team established a Restoration Advisory Board and scheduled regular meetings. The first meeting, held in July 1995, defined common goals for the investigation and remediation of BBR.

Those goals include: to conduct a safe and timely cleanup, to involve the community, to protect the ecology, to provide better access to technical assistance, to provide water resources where necessary, to obtain additional funding, to address the High Impact Area with the Air Force, and to preserve the environment.

The project team compiled and placed documents relating to the history of the BBR in an Administrative Record with copies provided the Rapid City Public Library, the Oglala Lakota College and the BBR project office for public access, helping to keep citizens involved and aware of activities and decisions.

In 1996 and 1997, an aggressive initiative called the Department of Defense/Native American Memorandum of Agreement/Cooperative Agreement enabled Native Americans, with funding from the Department of Defense, to obtain the qualifications necessary to clear their own lands.

> ***"The synergy has been terrific and the best part of the project."***
>
> **Dell Petersen**
> **U.S. Air Force**

With the help of the trained tribal technicians, the BBR project team led a series of methodical ordnance sweeps and clearances throughout the former BBR.

On the vast site, the sweeps using handheld equipment could only cover three to 25 acres a day. To speed the process, USACE and the Naval Research Lab, conducted additional surveys using more accurate innovative technology.

Using a helicopter with a boom equipped with a magnetometer and electromagnetic sensors, USACE performed airborne detection surveys to identify metallic anomalies, or irregularities, buried below the ground surface. Using a Global Positioning System, nearly 1,600 potential ordnance locations were identified and mapped within a 14-week period.

The installation of the rural water supply system brought potable water to the Oglala Sioux reservation. The Mni Wiconi ("Water is Life") Project Act of 1988 required the provision of safe and adequate municipal, rural and industrial water supply for residents living in southwestern South Dakota.

Working together to improve the quality of life for the tribes, USACE and tribal technicians performed a UXO sweep along the pipeline route. As a result, the pipeline installation project was completed with no injuries or unexpected detonations. Bill Supernaugh of the National Park Service says the emphasis on project safety "speaks volumes to what the group is trying to achieve."

Despite the team's progress, members acknowledge that challenges have arisen along the way. "We have to fight every year for funding, both within our system and the bigger system of the U.S. government. It is a challenge to keep the office here and not let it...die because of funding," Featherman-Sam said.

Kirk Engelbart of the USACE concedes that sometimes it seems as if the project's fate will be determined by funding. Due to funding delays, the Air Force will have to postpone the initiation of cleanup projects at the High Impact Area until at least 2005.

Plans for a Lakota Heritage and Education Center have also been stalled due to funding. Supernaugh notes this is a top concern because if the funds do not come through, "it would impair the credibility of those who continued to work with the Tribe."

The team plans to begin the Remedial Actions at the former BBR in 2004. Priorities for cleanup have been outlined in a set of six Action Memorandums starting with clearance of ordnance around active homesteads. Following the active homesteads, other working structures and the access roads leading to them will be cleared.

The remaining areas - former practice targets in selected sectors, primary ranching roads, and major highways - will be cleared as funds are allotted. Until remedial actions are complete, institutional controls such as signs posted around the BBR, classroom education, internet website, and the RAB meetings, will continue to be used.

Thus far, the teamwork at the former BBR has been harmonious with the group's mission statement: "We agree and commit to work together in a spirit of mutual trust and respect. We will do so in order to ensure the safe and timely mitigation and restoration of the former bombing range lands for the betterment of this and future generations."

"The synergy has been terrific and the best part of the project," said Dell Petersen, U.S. Air Force.

For more information contact the Omaha District Public Affairs Office at (402) 221-3917/3913.

Surfer leads new initiative with study, model

By CHRISTIANA SWANSON
Jacksonville District

A life-long surfer, little did this Texas transplant dream that one day she'd ride the wave of overseeing the nation's first carrying capacity study for the U.S. Army Corps of Engineers. It's been quite a journey for civil engineer Debbie Peterson, who first practiced her craft as a teenager at Mustang Island Beach in the 1970's.

Debbie Peterson

Navigating the crashing waves along the Texas coast has brought her all the way to becoming a pioneer for coastal preservation today as the Jacksonville District's planning technical leader for the Florida Keys Carrying Capacity Study (FKCCS).

Peterson has led the accomplishment of creating the nation's first spatially driven, comprehensive model that shows real-time impacts to growth proposals.

The precedent-setting model "uses science to determine the appropriate amount of development, redevelopment, and even restoration required for a healthy ecosystem in the Florida Keys while including human needs as well," said Peterson.

The model allows for effective evaluation of the appropriate course for Florida Keys development for the next 20 years. Peterson's coordination and leadership efforts in this seven-year study won for her both Headquarter's and South Atlantic Division's Planning Excellence Award for 2002.

Unlike traditional Corps studies that determine federal interest in a civil works construction project, the FKCCS's purpose was to develop a software planning tool, the Carrying Capacity Impact Assessment Model, and was to be used by state and local government.

Thirty-eight individuals representing government agencies, intervenors for the lawsuits leading to the FKCCS and concerned citizen groups participated in developing a scope of work for the FKCCS.

They identified outstanding issues and uncertainties regarding species, ecosystems, relationship of land development activities and the marine environment, water circulation and water quality modeling, and ecosystem modeling.

A group of 65 technical experts then met for a series of workshops to address the uncertainties and refine the study approach, and the assessment model was born. A Local Planners Working Group, made up of representatives from local, state and federal government, the technical contractor and the South Florida Regional Planning Council, formed to monitor the study progress and assist in ensuring the study and model responded to the users' needs.

An aggressive public outreach program ensured the public was kept informed and involved in the process and that concerns were being heard and incorporated.

In June, Peterson and Jim Duck, Planning Division chief, and Ricardo Calvo, URS Corps (technical contractor), presented an overview to South Atlantic Division showcasing potential uses. Corps experts are now getting the answer to many years-old questions about the amount of waste and storm water loads the Keys are generating into Florida Bay and the surrounding marine environment, and what happens to it.

The district's Regulatory Division is planning to use the model for permitting decisions in the Florida Keys and possibly apply the methodology toward promoting smarter development within other fast growing areas in Florida.

"To our knowledge, nothing has ever been done to this scale…it truly is cutting edge technology," Duck said.

This became apparent when URS Corporation submitted the study and model for Engineering Excellence awards to the Florida Institute of Consulting Engineers and the American Council of Engineering Companies.

Both the study and model received Grand Awards in both the state and national competitions, which is a high honor comparable to the Academy Awards of the entertainment industry. Even the Institute for Water Resources refers to the success of the FKCCS and recommends other areas in the United States use the process to determine how much growth is appropriate for their particular set of issues and existing conditions.

"It's been an incredible process...two reviews by NAS, with the result being very high marks which validates the value and usefulness of the study and model.

"And it was Debbie's imagination and spunkiness which helped put together such a large and diverse team that has made everything possible," Duck said.

As the Institute of Water Resources pointed out in its review of the study, having the "right" people on the study team is critical to the success of a cutting edge study such as the FKCCS, with its many stakeholders and their expectations.

Peterson got a lot of help from the Jacksonville District "home" team including: Cheryl Ulrich, Project Management; Rory Sutton, Information Management; Steve Traxler and Bill Hunt, Planning; Mitch Granat, Engineering and South Atlantic Division's Wilbert Paynes and Frank McGovern, both of Planning; and Headquarter's Gary Hardesty, South Atlantic Division Regional Integration Team.

It's been an incredible ride for Peterson, whose dream as a four-year veteran with the Corps 10 years ago was to make a difference in the area of coastal engineering. Since joining the Corps in 1989, Peterson has earned her P.E. designation, earned a master's degree in Natural Resources Management from the Florida Institute of Technology, married and adopted a son, Raymon Luis, now 20 months, and co-located to Palm Bay to be close to the Keys action.

Peterson will continue to be a part of the Carry Capacity effort as there are still opportunities to update the model and data bases for additional uses.

Peterson scans Melborne Beach, her blue eyes automatically sizing up the surfing conditions, and is very satisfied in knowing that she's accomplished many of the goals she had set for herself as an emerging coastal engineer for the Corps.

Accomplishing this task goes to the heart of what Peterson has always believed in—just as the ocean waves gain and recede in harmony, there has to be a balance between development and nature for all of God's creatures to survive.

"It's very satisfying to know that we've developed a tool that will help find the correct balance for such a significant habitat as the Florida Keys," she said.

For more information contact the Jacksonville District Public Affairs Office at (904) 232-2235.

Communities

Continued from Page 2

the Environmental Operating Principles throughout the Corps.

The Environmental Community of Practice will provide a forum where Corps members can talk with one another, build better communication bridges both internally and externally, access environmental lessons learned, share successes and learn about the smart ideas that others are already using. All of this ultimately should help reduce costs and move projects along more quickly, added Ken Gregg, Environmental Community of Practice team leader.

It brings together all the environmental capabilities within the Corps, all the talent, techniques and tools, making them available to all. It will assist the Corps in achieving the Chief of Engineers' vision of one Corps operating virtually in a learning organization.

The community also is a way to promote consistency as Corps members will be able to take advantage of an innovative breakthrough in one area and quickly institute it throughout the environmental activities.

A Project Delivery Team, with team members from Corps districts, divisions, laboratories and Headquarters, has met three times to produce an Environmental Community of Practice Program Management Plan. One of those meetings of the Project Delivery Team, co-chaired by Beverley Getzen, Office of Environmental Policy, and Gregg, occurred Feb. 24-26 at Fort Belvoir, Va. Several Senior Executive Service members attended to provide their insight into what is expected of communities of practice in general and the Environmental Community of Practice, in particular.

"The definition of success," Rivers said, "will be sharing knowledge effectively across the organization. We're going to leverage our assets as we become advocates for the Corps environmental capabilities. The Environmental Community of Practice doesn't own or direct programs. We're all about knowledge."

"What we're looking for is better synchronization and communication," said Michael White, chief of the Operations Community of Practice. "We need to make sure we're talking with one another and take the best we can of both the Civil Works and Military Programs worlds and apply it to everything we do. We're a learning organization. We learn by doing things right; we also learn by doing things wrong."

Donald Basham, Engineering and Construction Community of Practice chief, agreed. "We have great examples throughout the years of the environmental work we've done. It's like a bunch of islands out there. What we need to do with the Environmental Community of Practice is to bring those islands together. We need to connect with others and rely more on one another," he said. William Dawson, chief of the Planning Community of Practice, said that of the five identified Community of Practice functions, doctrine and providing a capable workforce are key. They distinguish the Corps of Engineers from other agencies, Dawson said.

One way in which the community of practice will share information is through the Environmental Community of Practice Web Portal, currently being developed. It will give community members a one-stop place to find lessons learned and communicate with one another. "The Web portal, which will be available on everyone's desktop, will provide ready access to the capability of subject matter experts, lessons learned systems and innovative technologies," Gregg said.

The core group of Corps members at Headquarters assigned to the Environmental Community of Practice is relatively small. Most employees will find themselves working with one of the many environmental sub-community groups, which are still being identified. In addition, a small steering committee is being formed to identify policy issues and facilitate the vertical integration of the community of practice and the cross integration between civil works and military environmental projects and programs.

Goats

Continued from Page 8

at the top and eat down. They constantly move, and 80 percent of what they eat is broadleaf and woody. They actually stimulate grass growth by biting off the top."

The goats eat everything from English ivy and poison oak to small trees, nap weed, leafy spurge, Canadian and Russian thistle, and bitter brush. They are hired to clear brush for fire control, to clean riparian areas near salmon bearing streams, and to tidy up private property. Unlike cattle, goats are safe to graze near waterways because they won't go near the water.

"They hate rain so much, we can only work on the west side during the summer," Harris laughed.

The Harrises sometimes split the herd and work two jobs, travelling from Wyoming and Colorado to New Mexico, Nevada or California. Their trucks haul everything from the galvanized steel panels that make up the pens to water tubs and vet supplies.

The job is not exactly cushy. The Harrises work 365 days a year and have been at it for seven years.

"It's not just taking your animals out and grazing them," Harris explained. "It's a huge management process. Jobs have to be tightly scheduled, because the goats need to eat every day. They need to be intensively fenced and moved in small doses. Goats get easily bored, and if they do, they become destructive. You want to leave the area better than when the goats arrived.

"Weeding with goats is efficient and natural," she added. "We require a restoration plan wherever we work -- planting competitive species or nurturing species that are there. If the goats just came in and ate, that wouldn't solve the problem. It's a land stewardship job basically."

"They're a neat alternative," said Duncan. "And at a total cost of $5,000 for 10 days, the goats are a less expensive alternative to manual labor, plus they are more likely to cover 100 percent of the dam's embankment."

The Corps' "vegetation management group" was thrilled with the experience. The goats ate everything in sight. They don't eat Scots Broom and blackberries to the ground, but they did defoliate them and, Duncan said, after several years this should reduce the stocks. They also provided a topic of conversation for people from surrounding towns for nearly two weeks.

"We're very happy with the quality of work," Duncan said. "We're looking at doing several more dams—Dexter, Hills Creek, Lookout Point next year. And we're getting a quote on the Long Tom River. If it works for fill dams, it seems like it would work for river banks too. We can't find a downside."

For more information contact the Portland District Public Affairs Office at (503) 808-4510.

Conference offers focus on environmental sustainability

The 2004 Facilities and Asset Management Conference May 3-7 in Orlando, Fla. will offer several technical program focus areas. Conference tracks offered include Project Planning, Design and Construction, Facilities Operation and Maintenance, Sustainability and Environmental Leadership, Property Management and Compliance and Risk Management.

The theme for this year's conference is "Stewardship of Federal Assets, United Commitment to Excellence," and will include 150 vendors showcasing products and services associated with the conference theme.

The technical program focus areas are of interest to facility managers (supervisory, project/team managers, and maintenance employees), property managers (real, museum, and personal), program managers and planners (area, regional, headquarters, district), bureau/agency leadership, engineers, architects, and landscape architects, or construction supervisors and inspectors.

The conference, sponsored by the Planning, Design Construction and Maintenance Council will be held at the Rosen Centre Hotel.

On-line hotel and conference registration is at www.doi.gov/conference/facilities, or contact Eric Quinn at (303) 445-2709, or by email at equinn@do.usbr.gov.

Alaska

Continued from Page 7

model that created a highly integrated team of government and contractor personnel that resulted in a savings of $900,000 over two years and shaved five years off the cleanup schedule.

The PDT reduced the number of disputed sites from more than 150 to less than 35. The team replaced dozens of distinct and disconnected data sets with a single database that could be shared with all parties. In addition, the team used local people and resources whenever possible, even developing a special composting method with locally available fish and wood waste that reduced petroleum contamination levels in the soil.

"Stakeholders were involved in every step of the process," said Suzanne Beauchamp, Alaska District FUDS program manager.

The Metlakatla Indian Community formed an Environmental Restoration Advisory Committee. Native American Lands Environment Mitigation Program (NALEMP) work was assigned to the Metlakatla Indian community through a cooperative agreement, infusing approximately $3.5 million into the community.

The TERC contractor and its subcontractors hired local companies as subcontractors for heavy equipment operation and barging services. They hired local residents to do water and soil sampling, brush clearing, and office administration.

Types of work conducted at multiple sites throughout the island were similar enough to allow for a common management plan for fieldwork. The Operations and Management Plan and Quality Assurance Program Plan could be used for all the cleanup operations and contain contract specifications that can be applicable to any contractor conducting the work. The approach saved time and approximately $45,000 per year.

During cultural resource evaluations, over 100 features were potentially eligible for preservation as significant sites under the National Historic Preservation Act. The Corps joined financial forces with the Federal Aviation Administration to share costs associated with mobilizing qualified subcontractors to the remote sites to make definitive determinations of eligibility.

The PDT also sequenced NALEMP-funded removal work to coincide with mitigation of eligible features. In all, cost sharing between FAA and FUDS and actively sequencing work appropriate to the critical tasks saved $168,000 over two years.

Because of relative isolation and environmental conditions, many standard approaches to site investigation and remedial action were deemed infeasible. Site conditions consist primarily of wet muskeg and rain saturated thick vegetation.

The team conducted treatment pilot studies to assess viability of certain techniques under local conditions. The island has little topsoil but an abundance of fish waste from the local processing plant and wood waste from years of logging and the local timber mill.

A pilot study to determine the feasibility of composting these local waste products with soil contaminated with petroleum found that the process reduced contamination by a factor of three. The resulting product of treated soil was a cleaner, high organic content soil that was used to recover and re-vegetate excavated sites on the island.

Another method was developed where windmills circulate air through steel pipes embedded in soil stockpiles, effectively vaporizing petroleum out of the soil.

"The Annette Island team demonstrated that a cooperative effort can accomplish common goals even at a site with multiple landowners, responsible parties, stakeholders, and regulatory agencies," said Dennis Druck, an Environmental Scientist at the U.S. Army Center for Health Promotion and Preventive Medicine and a judging panel participant. "The accomplishments of this team demonstrate the benefits of working closely with a community."

For more information contact the Alaska District Public Affairs Office at (907) 753-2520.

Photo by Kiwi Thompson

The sun sets on Annette Island in the Tongass National Forest, the largest national forest in the United States.

Virtual team speeds removal action

By MARY BETH THOMPSON
Baltimore District

After New England District unearthed several ordnance items at a Rhode Island environmental remediation project in mid-September, a response team was formed with people from three Corps districts and one center.

Initially, the widespread team communicated by telephone conference and email. The rapid start helped the team accomplish the expanded scope Time Critical Removal Action far more quickly than usual.

"We operated as a virtual team to get the project off the ground," said George Follett, Baltimore District ordnance and explosives safety specialist. "Most Time Critical Removal Actions like this take three to four months to start any fieldwork. We were onsite and excavating within three weeks."

After the discovery of ordnance items, New England District contacted the Engineering and Support Center in Huntsville, Ala.

Then, Baltimore and Omaha Districts were called in. By Sept. 26, the team was formed.

New England funded the project. Huntsville contributed technical guidance. Baltimore served as the OE Design Center and supplied the OE safety specialists. Omaha provided the rapid response contract and contractor.

The team first "met" in a phone conference at 4 p.m. Sept. 29. At 7 a.m. the next day, members arrived for a site visit.

Team members returned from Rhode Island to their locations and again took advantage of electronic means of communication as they wrote and reviewed the work plan.

"The biggest difference in this case was the speed in which the project documents were prepared, reviewed and approved," Follett said.

By Oct. 21, the contractor, Weston Solutions, mobilized on site, which had been a salvage yard at the former Quonset Point Naval Air Station.

Weston excavated the burial pits. Technicians and equipment operators separated ordnance items from other debris. The OE items were identified and inventoried. They were determined to be inert and disposed of as scrap, except for a few items that were turned over to the Quonset Point Air Museum.

In the process, the contractor removed 100 cubic yards of metal scrap and 440 cubic yards of tires, and found 95 inert ordnance items. All work was completed Nov. 14.

The site was returned to Conti Environmental, which had been treating groundwater contamination there for New England District when the ordnance items were discovered.

Photo by George Follett

Ordnance at a Rhode Island environmental remediation project.

DEPARTMENT OF THE ARMY
U.S. ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
P.O. BOX 1600
HUNTSVILLE, AL 35807-4301

OFFICIAL BUSINESS